

Appendix A

Planning and Research Methods

*This appendix describes the plan development process and the methods used to collect and analyze the data and information used in **Nevada's 2003 Outdoor Recreation Plan**. The documentation of methodology gives an overview for understanding the narrative, tables, and figures found in the plan. Persons wishing further explanation of these methodologies, or copies of questionnaires or reports available should contact the park and recreation program manager at the following addresses.*

*Park and Recreation Program Manager
Nevada Division of State Parks
1300 South Curry Street
Carson City, Nevada 89703-5202
Telephone: 775-687-1694
Fax: 775-687-4117
Email: jdeloney@parks.nv.gov*

Plan Development Process

Development of **Nevada's 2003 Outdoor Recreation Plan** occurred over a planning cycle lasting about four years. Figure A.1 depicts the sequence of elements in the plan development process, which will be the framework for the discussion in this appendix.

Evaluation and Concept Development

To initiate the development of **Nevada's 2003 Outdoor Recreation Plan**, the park and recreation program manager assessed the strengths and weaknesses of **Recreation in Nevada—1992 Statewide Comprehensive Outdoor Recreation Plan (1992 SCORP)** (Nevada Division of State Parks 1992) in consultation with the following:

- Steve Weaver, Chief of Planning and Development, Nevada Division of State Parks, Department of Conservation and Natural Resources
- Kelly Dziekan, Head, Statewide Planning and Research, Marketing Branch, Division of Communications, Texas Parks and Wildlife Department.
- Dr. James A. Busser, Associate Dean for Academic Affairs, W. F. Harrah College of Hotel Administration, Leisure Studies Program, University of Nevada, Las Vegas.

Various National Park Service staff were consulted but asked not to be acknowledged in this plan.

The assessment of Nevada's **1992 SCORP** led to the following priorities to update the 1992 plan.

1. Update the 1986 outdoor recreation participation data cited in Nevada's **1992 SCORP**.
2. Strengthen the process used to determine issues and recommended actions to address the issues in Nevada's **1992 SCORP**.
3. Use data to be produced by the National Survey on Recreation and the Environment 2000 to augment empirical data collected to update Nevada's **1992 SCORP**.

Due to budgetary, time, and staff constraints, it was not feasible to conduct an inventory of the parks and outdoor recreation areas, facilities, and trails.

Data Collection and Analysis

The process to develop Nevada's **2003 Outdoor Recreation Plan** relied on empirical and secondary sources of data. Data is presented quantitatively and qualitatively. Outdoor recreation participation data is an example of quantitative data. The presentation of issues and recommended actions to address the issues are examples of qualitative assessments.

Throughout the issues and actions identification and ranking process, all correspondence to participants in the process referred to the **1992 SCORP** update as **Nevada's 2001 Outdoor Recreation Plan**. Later the title to the 1992 SCORP update was changed to **Nevada's 2003 Outdoor Recreation Plan**.

Development of Issues and Actions

A review of the **1992 SCORP** revealed that issues were determined by a mailing followed by six public meetings across Nevada to develop ten outdoor recreation issues. These ten issues were mailed to public and agency representatives for review. Respondents were asked to rank the ten issues from 1-10, with number 1 being the highest. The final ranking of the ten issues in the **1992 SCORP** was based on 33 responses. Documentation of the process to develop actions cited in the **1992 SCORP** leaves some question as to how this process was conducted (Nevada Division of State Parks pages A-1 and A-2).

The public input process adopted to develop issues and actions for this plan differs considerably from the process used to develop Nevada's **1992 SCORP**. Both the issues and actions presented in the **2003 SCORP** were developed using a modified Delphi technique conducted entirely by mail surveys. A brief discussion of the modified Delphi follows.

The Modified Delphi Technique

The strength of the modified Delphi technique used to develop issues and actions for the **2003 SCORP** is dependent on an adequate sample size, the representativeness of those selected to participate in the process, and the response rate. Participants in the process are selected because of their interest in outdoor recreation or because they may be impacted by the outdoor recreation issues and actions. Accordingly, participants need to be qualified to

respond to the subject matter presented in the questionnaires.

Participants in the process respond from the privacy of their home or office, which takes less time and money than it does to attend public meetings or workshops. All mailings included a postage-paid self-addressed return envelope. The Nevada Division of State Parks does not reimburse participants for expenses to attend public workshops. This distinction is particularly important for participants from the private and non-profit sector who must pay their own expenses.

The major disadvantage of a modified Delphi technique conducted entirely by mail is the loss of interactions among participants during public workshops. Interactions tend to stimulate thought and ideas by the participants. These interactions often result in a refinement of issues and actions.

Six surveys were conducted to develop the issues and actions for the **2003 SCORP**—three to develop issues and three to develop actions. Each survey required follow-up actions to increase the response rate. Follow-up actions included email reminders, subsequent mailings of the questionnaires to encourage responses, and verbal contacts. The purpose of each of the six surveys is listed below.

Purposes of the Six Surveys

1. Survey # 1—Determine a list of persons to participate in the process and develop a list of outdoor recreation issues in Nevada.

2. Survey # 2—Rank the outdoor recreation issues identified in the first survey.
3. Survey # 3—Obtain descriptions of the top eight outdoor recreation issues identified in the second survey.
4. Survey # 4—Solicit a list of actions recommended to address the top eight outdoor recreation issues identified in the first three surveys.
5. Survey # 5—Preliminary ranking of the actions identified in mailing # 4.
6. Survey # 6—Rank and reduce the actions identified in survey # 5.

Details of the process adopted to implement the modified Delphi technique are described in the following sections of this appendix. Results presented in Chapter 1 verify that this approach does produce reliable results to develop issues and actions for an outdoor recreation plan.

Survey # 1—Determination of Participants and a List of Issues

The park and recreation program manager, Nevada Division of State Parks, compiled a list of 300 persons as potential participants in the process. Sources of persons on the list included personal contacts and recommendations from others impacted by or engaged in outdoor recreation activities or outdoor recreation management or administration. Extensive use was made of information available on the Internet to identify potential respondents. The Internet permitted access to urban and rural areas throughout Nevada to identify potential participants. For

example, chambers of commerce, user groups, and private and governmental entities have numerous websites with the names and contact information of key actors in the outdoor recreation sector throughout the state.

The goal was to obtain 50 valid responses for each of the five surveys. Each potential respondent would be mailed all five surveys over a period of time. Assuming a 50% response rate, a sample size of 100 potential respondents would receive each of the five surveys.

From the list of 300 potential participants, 216 persons were selected to receive a survey mailed on July 16, 2001. Details of the selection of the 216

persons are described in chapter 1 of this plan. The survey explained the modified Delphi process to the recipients and asked them if they would participate in the process to identify issues and actions recommended to address the issues. Of the 216 surveys mailed in the first mailing, only 3, or 1.4%, were returned as non-deliverable, leaving an effective sample size of 213. Four surveys, or 1.9%, required address changes. Thus, 7 addresses, or 3.2%, were incorrect.

Of the 213 who received the first survey, 145, or 68 percent, responded. Of the 145 who responded, 132, or 62%, agreed to participate and 13, or 6%, declined (table A.1).

<p>Table A.1 Results of the First Survey to Determine Participants and a List of Issues (216 Potential Participants)</p>		
	Number of Responses	Percent Returns
Total Mailed	216	100
Non-Deliverables	3	1
Addressed Changed--Resent	4	2
Effective Sample	213	99
Yes—Will Participate	132	62
No—Will Not Participate	13	6
Non-Responses	68	32

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

The 132 recipients of the first survey who agreed to participate in the issues and actions development process were mailed two additional surveys to complete the issues process. The second survey asked participants to rank the

issues identified in the first mailing. The third survey asked participants to provide a brief description of the issues identified in the first survey and ranked in the second survey. Response rates to the three surveys are shown in table A.2.

Table A.2 Issues Determination—Questionnaire Returns from the Three Surveys				
Survey	Date Mailed	# Mailed	Returns	
			#	%
First Survey*	July 16, 2001	213	70	33
Follow-Up	August 15, 2001	62	53	25
Total Responses	--	--	123	58
Second Survey	September 19, 2001	132	60	45
Follow-Up	October 5, 2002	72	41	31
Total Responses	--	--	101	77**
Third Survey	November 20, 2001	132	58	44
Follow-Up	December 17, 2001	74	24	18
Total Responses	--	--	82	62

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

*Effective sample size for the first survey was 213. Of these, 132, or 62% agreed to participate in the issues and actions surveys; therefore, the sample size for the second and third survey was 132. Of the 132 who agreed to participate, 123, or 93%, returned a valid questionnaire.

**Total percentage does not equal the sum due to rounding.

The purpose of the first survey was to introduce potential participants to the process, identify those who wished to participate, and to update the address database of the respondents. To accomplish this purpose, the first survey consisted of three parts. The first part was a letter briefly explaining the following:

- The SCORP.
- The Land and Water Conservation Fund.
- How the 2002 process to develop issues and actions differed from past processes.
- How much time it would take participants to participate in the process.
- What the participant would be asked to do if they agreed to participate in the process.
- How the participants were selected.

Recipients were informed that the process to identify and rank actions recommended to address the issues would mirror the issues process. Instructions explaining the actions process were mailed to the respondents when the actions process was initiated.

The second part of the package in the first survey, Attachment A—Participation Response, asked all respondents to

- Check one of two options to indicate whether or not they would participate, and to
- Verify/update the contact information provided. For those electing not to participate, this action was optional. Non-participants were asked to update their contact information if they wished to remain on the Nevada Division of State Parks mailing list. A few of the respondents did elect this option.

The third part of the package in the first survey, Attachment B—Issues Determination—2001 SCORP, asked those who agreed to participate in the process

- To review ten outdoor recreation issues listed from the **1992 SCORP**, and
- Then list on the form provided the five outdoor recreation issues that they thought were the top ones for Nevada.

Participants could select five issues from the ten listed from the **1992 SCORP** without modifying them, they could modify the **1992 SCORP** issues, or they could list entirely new issues, or any combination of these options. Respondents exercised various combinations of all these options.

Soliciting responses using an open-ended questionnaire interjects less bias than providing participants a list from which they may select outdoor recreation issues. Including the **1992 SCORP** issues list offered continuity from the 1992 to the **2003 SCORP**. If participants in the process were properly selected, they would overcome the bias and correctly update the **1992 SCORP** list of issues. Thus, the decision was made to include the **1992 SCORP** issues list on the questionnaire. Results presented in table A.3 indicate that the anticipated bias was not a significant factor.

Follow-ups to the First Survey

Through August 14, 2001, a total of three non-deliverables, four address changes, and 72 yes responses to the

participation question, and 70 completed questionnaires had been received. To encourage non-respondents of the first survey to respond, a follow-up reminder letter was either emailed or mailed through the postal service to non-respondents on August 15, 2001.

The reminder letter did not contain a copy of the questionnaire sent out in the first survey. The response rate to the first survey could have been increased by attaching a copy of the questionnaire to the first reminder letter and by sending out a second reminder letter with a copy of the questionnaire attached. These actions were not taken due to budgetary, time, and staff constraints.

Results of the First survey

One hundred and thirty-two respondents to the first survey agreed to participate in the issues and actions surveys. Of the 132 who agreed to participate, 123 returned valid questionnaires for the first survey. Of the 132 respondents who agreed to participate in the surveys, email addresses were obtained for 115, or 87%.

The 123 respondents to the first survey identified 228 different issues. Table A.3 shows how respondents presented these issues. All ten of the **1992 SCORP** issues were selected by respondents as listed in the 1992 plan without modification. Respondents personalized the ten **1992 SCORP** issues to create 134 modified issues. Another 84 issues varied enough from the **1992 SCORP** issues to categorize them as new issues. Although categorizing an issue as the same,

modified, or new compared to the **1992 SCORP** issues is subjective, this distinction was useful in determining

how to present issues to respondent in the second survey.

<p>Table A.3 Categorization of Issues From the First Survey Based on a Comparison of Responses From the First Survey to the 1992 SCORP Issues</p>	
Categorization of 228 Issues	# Issues
1992 SCORP Issues—Without Modification*	10
1992 SCORP Issues—Modified	134
New Issues	84
Total Number of Issues	228

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

*The ten **1992 SCORP** issues were selected 381 times by respondents without modification.

Table A.4 shows how respondents reacted to each of the ten **1992 SCORP** issues. Table A.4 lists the ten issues as they were ranked in the **1992 SCORP**. To reduce bias in the first survey, the issues were not ranked and listed in the reverse order from that shown in table A.4. Table A.4 illustrates that the order of presentation in the first survey did not bias the responses. Issues from the **1992 SCORP** presented to the respondents in the first survey received 23 to 45 votes each without modification. Respondents modified each of the ten **1992 SCORP** issues 5 to 26 times each, and listed 84 new issues.

Throughout the process to identify and rank the outdoor recreation issues and actions, this author sought the advice of Dr. Carson Watt, Professor and Extension Specialist, Texas Cooperative Extension Service; Department of Recreation, Park and Tourism Sciences; Texas A&M University, College Station, Texas. Dr. Watt has specialized in how to objectively obtain effective public input in outdoor recreation planning processes for approximately 30 years. Dr. Watt's advice proved to be invaluable. Below is a summary of Dr. Watt's advice.

Table A.4
How the Ten 1992 SCORP Issues Fared in the First Survey

1992 SCORP Issue	Number Respondents Selecting		
	No Change	Modified	Total
1. Existing levels of outdoor recreation funding are inadequate to meet the recreation needs of Nevada.	45	15	60
1. Water resources are vital components of Nevada's recreational base and should be protected to maintain sufficient quantity, quality, and adequate accessibility, where appropriate.	32	12	44
3. Maintenance and manpower are important factors in providing quality park and recreation facilities and opportunities for the public.	45	12	57
4. The protection of Nevada's natural, cultural, and scenic resources is a critical part of recreation planning throughout the state.	45	11	56
5. There is a growing concern for protecting public access to public lands.	45	26	71
6. Nevada's growing population is placing an increasing demand on recreation resources and recreation suppliers at all levels, statewide.	41	5	46
7. Coordination and cooperation between public and private recreation providers at all levels, and between these providers and the general public, are important partnerships to pursue.	31	10	41
8. The recreational needs of Nevada's special populations (including seniors, the handicapped, minorities and low income persons) should not be overlooked.	23	11	34
8. There is a growing need to provide recreational trails throughout the state, in both urban and rural areas.	42	16	58
10. Environmental interpretation and education programs should be encouraged throughout Nevada.	32	16	48
Total Votes for 1992 SCORP Issues	381	134	515

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Initial responses to early mailings were very low. Previous experiences by this author when applying this same process produced high response rates without follow-ups. On August 7, 2001, Dr. Watt was contacted for his analysis and advice. Dr. Watt offered the following.

- The modified Delphi technique employed to identify and rank the issues and actions in **Nevada's 2003 Outdoor Recreation Plan** is actually a survey, and should be treated as such to maximize return rates. Follow-ups and reminders are required.
- Dr. Watt suggested sending a second letter as a follow-up to the first letter, shooting for a 50% response rate by mail. Then call the remaining non-respondents with an overall goal of a 75% response rate. Subsequently, about one week after receiving Dr. Watt's advice, a follow-up letter was mailed to non-respondents, increasing the response by mail to 58%. Staff, time, and budgetary restraints did not permit the telephone follow-up suggested by Dr. Watt. Had sufficient resources been available to make the telephone

follow-up calls or to conduct another follow-up by mail, this author believes the 75% response rate would have been achieved.

- Motivation for respondents in Texas differs from respondents in Nevada. Respondents in Texas understood the direct tie between the development of the SCORP and the state grants program passed by the Texas Legislature and responded accordingly. In Texas, the state grants program provided approximately \$28 million annually in state funds for the acquisition and development of outdoor recreation areas and parks. Half of these state funds went to fund state parks and half to fund local parks (county, municipal, etc.). The Texas SCORP was linked directly to the distribution of these state funds. Respondents understood this link. Thus, respondents in Texas had a significant financial incentive to respond. Texans felt that participation in the process allowed them to influence the distribution of the state funds. Nevada has no such state grants program. Thus, respondents in Nevada lacked the financial incentive found in Texas.
- If respondents to the first mailing change the **1992 SCORP** issues substantially, then these issues must be listed in the second mailing. The reason is to permit all participants in the mail survey an opportunity to vote on all of the issues as identified in the process by the participants.
- In the first survey, this author instructed respondents to rank the issues 1 through 5, with 1 representing the most important issue. Dr. Watt challenged this approach, explaining that simply

ranking issues 1-5 assumes that the respondent places equal importance on each issue, which is not true. He advised having each respondent list and weight five issues in the second mailing. This scheme was adopted as explained below.

The park and recreation program manager grouped the 228 issues into 12 general categories listed below. Then he consulted with Dr. Carson Watt again on September 6, 2001, seeking suggestions on how to proceed after respondents to the first survey produced the 228 issues. Issues of more importance to the respondents received more permutations than those of less interest.

- Interpretation and Education
- Recreational Trails
- Nevada's Special Populations
- Coordination and Cooperation
- Nevada's Growing Population Increases Demand
- Public Access to Public Lands
- Protection of Nevada's Natural, Cultural, and Scenic Resources
- Maintenance and Manpower
- Water Resources are Vital Components of Nevada's Recreational Use
- Funding
- Marketing, Tourism, and Economics of Outdoor Recreation
- Other

Dr. Watt said the task was to converge the list of 228 issues into a manageable list. When asked if the first issues survey could be used to eliminate half of the general categories to simplify the process for the respondents, Dr. Watt said no because the process thus far was designed to identify issues, not to eliminate issues. Eliminating general

categories would prevent respondents from voting on modified and new issues identified during the first mailing. All respondents need an opportunity to vote on all the issues.

To reduce the list of 228 issues, Dr. Watt outlined two options.

Option 1:

- Convene a panel of 4-5 persons to produce sub-groups under the 12 major categories before the next mailing. Composition of the panel was discussed. Concerning the use of state employees, Dr. Watt said the question is how worried the Nevada Division of State Parks is about appearances, i.e., would the public view the use of state employees as an adverse impact on the integrity of the process. The panel would have to exercise some liberties to produce the subgroups. Limit liberties afforded committee members to protect the integrity of the process.
- In the next mailing, ask respondents to rank the subgroups within each of the 12 general categories by selecting five issues within each general category and then allocate 100 allocation points among the five issues. Eliminate any issues that do not receive any points. This step would reduce the number of issues and subgroups within each general or major category. It would not reduce the 12 general categories.
- Follow with a third mailing to rank across major categories. Let respondents select a total of five issues across all general categories and then weight these five issues using the same 100-point allocation scheme described above.

Option 2:

- Send the list out as is and let the respondents pick their top five issues and then weight these five issues using the 100-point allocation scheme.

A hybrid of both options 1 and 2 was selected.

- A panel was convened to reduce the number of specific issues.
- Specific issues were grouped under the 12 general categories.
- Respondents were asked to pick their top five issues and weight them by the 100-point allocation scheme above.

Issues Panel

On September 12, 2001, the Nevada Division of State Parks convened a panel to group the 228 issues into subcategories under the 12 general categories, and to carefully eliminate similar issues from the list. Panelists were

- Steve Weaver, Chief of Planning and Development, Nevada Division of State Parks
- Mark Kimbrough, Region II Regional Manager, Nevada Division of State Parks
- Suzanne Sturtevant, Recreation Trails Program Manager, Nevada Division of State Parks
- Ed Skudlarek, Natural Resources Planner, Nevada Department of Conservation and Natural Resources

Jim DeLoney, Park and Recreation Program Manager, Nevada Division of State Parks, provided staff assistance to

the panel. The panel was asked to reduce the list of 228 issues to a less burdensome number before mailing the issues back to the participants in the issues process. Panelists were given the liberty to make minor word changes to issues to accomplish aggregation and elimination of duplicates as long as the meaning of the issues was not changed. Although this guideline restricted the panel's ability to reduce the 228 issues, it protected the integrity of the process. Accordingly, the panel effectively reduced the list of 228 issues to 185.

Another question posed to Dr. Watt was the optimum number of issues to select for publication in **Nevada's 2003 Outdoor Recreation Plan**. Strategic planning principles suggest a maximum of seven issues in a plan. Dr. Watt said if **Nevada's 2003 Outdoor Recreation Plan** would be used to justify projects for funding, this is an argument for more issues, not fewer. More issues permit local entities to use the plan to justify local projects. Fewer issues might restrict locals from submitting projects for funding, which would result in an undesirable consequence of the plan on local entities.

The question of how many issues to select for **Nevada's 2003 Outdoor Recreation Plan** was presented to Steve Weaver, Chief of Planning and Development, for resolution. The park and recreation program manager favored limiting the number of issues to five to reduce the time, workload, and cost required to complete the **2003 SCORP**. After reviewing the pros and cons of five versus more issues, Weaver made the decision to go with eight issues primarily for the reason cited above by Dr. Watt.

Regardless of the process selected to complete the issues identification and ranking process, Dr. Watt said the entire process should be documented and presented in **Nevada's 2003 Outdoor Recreation Plan** as an appendix. He recommended including the total list of issues identified by the respondents. The total list of issues identified by the respondents is not included in this plan, however, due to guidance from management to reduce the length of this plan. The entire list is available by contacting the Nevada Division of State Parks.

Survey # 2—Participant's Rank the Outdoor Recreation Issues

On September 19, 2001, the 185 issues resulting from responses to the first survey and work by the panel described above were mailed to the 132 participants in the process. Participants were asked to

- Pick five of the 12 general issue categories,
- Select five specific issues from among the five general categories chosen,
- List the five specific issues and rank them 1-5, and
- Weight the five ranked issues allocating a minimum of 10 points per issue and a maximum of 60 points for one issue, for a total of 100 points.

Weighting permitted participants to assign relative values to each issue. Weighted values were summed to

1. Rank the 12 general issue categories.
2. Select issues from the list of 185 issues to represent each of the top

issues selected for presentation in
**Nevada's 2003 Outdoor
Recreation Plan.**

Follow-Up to Survey # 2

A follow-up to survey # 2 (see table A.2) was mailed on October 5, 2001, to 78 participants for whom no responses had been received as of the date of the follow-up mailing. Six responses were received on the date of the follow-up mailing, and 41 returns were received after the date of the follow-up mailing, accounting for almost 41% of the total 101 returns received.

Analysis of Weighting Scheme to Rank the 12 General Issue Categories

Table A.5 documents the results of the weighting scheme to rank the 12 general issue categories. In a modified Delphi technique, such as the one adopted for the determination of issues for **Nevada's 2003 Outdoor Recreation Plan**, the

cutoff is typically drawn between 70-80% of the total weighted scores. The twelve general outdoor recreation issues categories were grouped into three tiers based on similarities of the weighted scores. Four general categories comprised each tier. Although the combined weighted scores for the eight categories in tiers one and two totaled 87%, both tiers were selected for inclusion in **Nevada's 2003 Outdoor Recreation Plan**. Scores for the categories ranked seventh and eight were so close that the arbitrary decision was made to include both. Tier three was not included.

"Public access to public lands" is clearly the number one outdoor recreation issue in Nevada. Its score of 2,135, or 21% of the total weighted scores, made it the only issue receiving a weighted score exceeding 2,000 points.

Table A.5
Results of Issues Process Weighting Scheme, Second Survey, to Rank the 12 General Issues Categories (Based on 101 respondents, or about 77% of 132 participants)

Analysis of First Mailing		Analysis of Second Survey (Based on weighting of specific issues)						
		General Category				Specific Issue		
		Rank	Total Weighted Points	% of Total Points	Cumm % of Total Points	Number Specific Issues Receiving Votes Per Category	Total Number Voting Per Category	Average Weight Per Specific Issue
12 General Categories	# Specific Issues Per Category							
Public access to public lands	30	1	2,135	21.1%	21.1%	25	99	21.6
Funding	18	2	1,834	18.2%	39.3%	16	79	23.2
Recreational trails	28	3	1,287	12.7%	52.0%	17	63	20.4
Protection of Nevada's natural, cultural, and scenic resources	17	4	1,087	10.8%	62.8%	13	56	19.4
Tier 1 Subtotal	93		6,343	62.8	62.8	71	297	
Water resources are vital components of Nevada's recreational use	12	5	758	7.5%	70.3%	10	40	19.0
Interpretation and education	16	6	635	6.3%	76.6%	10	37	17.2
Nevada's growing population increases demand	10	7	547	5.4%	82.0%	6	27	20.3
Coordination and cooperation	14	8	540	5.3%	87.4%	12	29	18.6
Tier 2 Subtotal	52		2,480	24.6	87.4	38	133	
Maintenance and manpower	12	9	487	4.8%	92.2%	10	27	18.0
Marketing, tourism, and economics of outdoor recreation	8	10	460	4.6%	96.7%	6	26	17.7
Other	10	11	265	2.6%	99.4%	5	13	20.4
Nevada's special population	10	12	65	0.6%	100.0%	4	5	13.0
Tier 3 Subtotal	40		1,277	12.6	100.0	25	71	
Totals	185		10,100	100.0%		134	501	
Average weight for all issues								20.2

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

“Funding” finished a strong second with 1,834 points, or 18% of the total weighted scores. “Recreational trails” came in at a distant third place with 1,287 points, or almost 13% of the total weighted scores. “Protection of Nevada’s natural, cultural, and scenic resources rounded out the top four issues

with 1,087 points, or almost 11% of the weighted total scores. Only the top four issues received more than 1,000 points each and more than 10% each of the total weighted scores. Thus, these four issues comprised the “first tier” in the issues ranking.

The “second tier” is comprised of the next four issues depicted in table A.5. Each of these issues received more than 5% of the total weighted scores. The four issues ranked 9-12 comprised the last or “third tier.” Each of these issues received less than 500 weighted points and less than 5% of the total weighted scores. Based on these criteria, issues ranked 9-12 in table A.5 were not selected for presentation in **Nevada’s 2003 Outdoor Recreation Plan**. The top eight outdoor issues selected for inclusion in **Nevada’s 2003 Outdoor Recreation Plan** garnered 8,823 weighted points, or over 87% of the weighted total.

Analysis of Weighting Scheme to Select Statements to Represent the Top 8 Issues

Once the top 8 general issue categories were determined, the next question was how to select issue statements from the list of 185 issues submitted to represent each issue. Weighted scores and issue statements were compiled in an Excel spreadsheet for sorting and analysis. Table A.6 records that portion of the spreadsheet which shows the weighted scores for the issue statements selected to cite the top issues for the **2003 SCORP**. The analysis surfaced two options.

Ideally, once the top 8 issues were selected, the first and best option was to send those issue statements garnering 70-80% of the total weighted score for each issue back out to participants in the process for another round of weighting. The second option was to use the weighted scores already available to select the issue statement to cite each of the eight issues in the **2003 SCORP**.

The first option, an additional mailing, would require more staff time, calendar time, and money. To exercise the second option, issue statements for each of the top 8 issues would have to be high enough to justify accepting the issue statements. The park and recreation program manager and the chief of planning and development reviewed the spreadsheet to determine which option to accept. The decision was that the weighted scores were sufficient to identify issue statements acceptable for publication in the **2003 SCORP** (table A.6).

Comparison of 2003 SCORP and 1992 SCORP Issues

Of interest is the comparison of the rankings of the issues in Nevada’s **1992 SCORP** with Nevada’s **2003 SCORP** presented in Table A.7. The most dramatic increases in rank were “public access to public lands” which moved from fifth in 1992 to first in 2001; “recreational trails” which moved from eight in 1992 to third in 2001; and “interpretation and education” which moved up from tenth in 1992 to sixth in 2001.

Declines in the rankings of issues from 1992 to 2001 were equally as dramatic for three other issues. “Water resources are vital components of Nevada’s recreational use” dropped from a tie for first in 1992 to fifth in 2001; “maintenance and manpower” declined from third to ninth; and “Nevada’s special population slipped from eighth to twelfth.

Table A.6				
Weighted Scores for Issue Statements Selected for Publication in the 2003 SCORP				
General Category		Weighted Score		Issue Statement
Issue	Rank	Issue Statement /Gen Cat	Issue % Of Gen Cat Total	Issue Statement to Represent the General Category
Access to Public Lands	1	780/2135	36.6%	There is a growing need to protect, maintain, and increase public access to public lands for the greatest diversity of outdoor recreational users.
Funding	2	430/1834	23.4%	Existing levels of outdoor recreation funding are inadequate to meet the recreation needs of Nevada.
Trails	3	240/1287	18.6%	There is a growing need to provide recreational trails and pathways throughout the state, in both urban and rural areas.
Natural, Cultural, Scenic	4	220/1087	20.2%	Protection of natural, cultural, and scenic resources needs to be put in balance with users. Create opportunities for users to participate in the protection, i.e., as site stewards—mandate that a majority of fees paid in a recreation area stay in that area for improvements and maintenance. Citizens acknowledge this as an investment and a way to participate in the conservation of these resources.
Water Resources	5	185/758	24.4%	Water resources must be protected to maintain the needed quantity, quality, and accessibility for public recreation. Recreation and wildlife depend on the limited water resources in Nevada.
Information & Education	6	195/635	30.7%	Encourage, fund, and provide environmental, cultural, and heritage interpretation and educational programs and opportunities, especially outdoor opportunities, throughout Nevada.
Growing Population	7	230/547	42.0%	Nevada's growing population is placing an increasing demand on recreation resources and recreation suppliers at all levels, statewide. New resources need to be identified, acquired, funded, and developed.
Coordination & Cooperation	8	105/540	19.4%	Coordination and cooperation between public and private recreation providers at all levels is very important. More true support from private citizens, user groups, and governmental entities (local, state, and federal) are important partnerships to pursue.
Weighted Score Sum		2,385/8823	27.0%	

Source: DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Two new catchall categories were added in the 2001 survey to capture specific issues submitted by respondents to the issues survey that did not conveniently fit under the other ten categories. These two categories, “marketing, tourism, and

economics of outdoor recreation,” and “other” combined received slightly over 7% of the weighted scores. Neither is included in **Nevada’s 2003 Outdoor Recreation Plan**.

<p><i>Table A.7</i> Comparison of the Rankings of General Issues in Nevada’s 1992 and 2003 SCORP’s</p>		
General Issues Category	2002 SCORP Rank¹	1992 SCORP Rank²
Public access to public lands	1	5
Funding	2	1 (Tie)
Recreational trails	3	8 (Tie)
Protection of Nevada’s natural, cultural, and scenic resources	4	4
Water resources are vital components of Nevada’s recreational use	5	1 (Tie)
Interpretation and education	6	10
Nevada's growing population increases demand	7	6
Coordination and cooperation	8	7
Maintenance and manpower	9	3
Marketing, tourism, and economics of outdoor recreation	10	NA
Other	11	NA
Nevada's special population	12	8 (Tie)

Sources:

¹DeLoney, James A. 2001. Nevada’s Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

²Nevada Division of State Parks. 1992. **Recreation in Nevada—1992 Statewide Comprehensive Outdoor Recreation Plan**. NDSP, DCNR. Carson City, Nevada.

Note: Issues 9-12, **2003 SCORP** Rank column, not included in the **2003 SCORP**.

Although table A.7 shows that the ranking of the issues changed from 1992 to 2002, this table also shows that the eight outdoor recreation issues identified and ranked for the **2003 SCORP** are generally the same eight issues cited in the **1992 SCORP**. Table A.8 compares the ranking and wording of the 2002 issues with the **1992 SCORP**.

Although funding slipped slightly from a tie for first in 1992 to second in 2002, the wording of the issue remained the same. The seven other 1992 issues were modified for the **2003 SCORP**. Some of the modifications were rather minor (table A.8).

Survey # 3—Participant's Describe the Top Outdoor Recreation Issues

In the third survey, initiated on November 20, 2001, 132 potential respondents were asked to provide a brief description of the top eight outdoor recreation issues identified for publication in **Nevada's 2003 Outdoor Recreation Plan**. Descriptions of the issues provided by the respondents are the key source of information for the presentation of issues in Chapter 1.

On December 17, 2001, a follow-up reminder was mailed to non-respondents. The follow-up consisted of a cover letter with a copy of the questionnaire attached. Eighty-two responses, or 62%, were received.

Follow-Up to Survey # 3

A follow-up survey # 3 was mailed on December 17, 2001, to the 76 participants for whom responses had not been received by the time the follow-up mailing was delivered to the State Mail Room. Two responses were received on the date of the follow-up mailing. Twenty-four responses, or over 29% of the total responses received for survey # 3, were received after the date of the follow-up mailing.

Outdoor Recreation Actions

Three surveys were conducted to identify and rank actions recommended to address the eight outdoor recreation issues presented in Chapter 1. The first survey was initiated on January 30, 2002; the second survey on April 30, 2002, and the third survey on August 30, 2002. Table A.9 shows the response rates from the three surveys.

Each follow-up mailing for the three surveys depicted in table A.9 contained a full set of questionnaire materials. Questionnaires were provided in the follow-up mailings for the convenience of the participants, and to improve the response rates.

Survey # 1—Identification of Actions

On January 30, 2002, an open-ended questionnaire was mailed to the 132 participants in the process requesting their help to identify and rank actions recommended to address the top outdoor recreation issues in Nevada. One participant responded to the survey on February 15, 2002, requesting that her name be withdrawn. The participant felt that her knowledge of the subject was inadequate for her to properly respond. This withdrawal reduced the sample size to 131.

<p style="text-align: center;">Table A.8 Trends in Outdoor Recreation Issues in Nevada—A Comparison of Issues as Cited in the 1992 SCORP with the 2003 SCORP</p>		
Issue Rank	SCORP	Issue Statement
1	2002 ¹	There is a growing need to protect, maintain, and increase public access to public lands for the greatest diversity of outdoor recreational users.
5	1992 ²	There is a growing concern for protecting public access to public lands.
2	2002 ¹	Existing levels of outdoor recreation funding are inadequate to meet the recreation needs of Nevada.
1 (Tie)	1992 ²	Same.
3	2002 ¹	There is a growing need to provide recreational trails and pathways throughout the state, in both urban and rural areas.
9	1992 ²	There is a growing need to provide recreational trails throughout the state, in both urban and rural areas.
4	2002 ¹	Protection of natural, cultural, and scenic resources needs to be put in balance with users. Create opportunities for users to participate in the protection, i.e., as site stewards—mandate that a majority of fees paid in a recreation area stay in that area for improvements and maintenance. Citizens acknowledge this as an investment and a way to participate in the conservation of these resources.
4	1992 ²	The protection of Nevada's natural, cultural, and scenic resources is a critical part of recreation planning throughout the state.
5	2002 ¹	Water resources must be protected to maintain the needed quantity, quality, and accessibility for public recreation. Recreation and wildlife depend on the limited water resources in Nevada.
2 (Tie)	1992 ²	Water resources are vital components of Nevada's recreational base and should be protected to maintain sufficient quantity, quality, and adequate accessibility, where appropriate.
6	2002 ¹	Encourage, fund, and provide environmental, cultural, and heritage interpretation and educational programs and opportunities, especially outdoor opportunities, throughout Nevada.
10(Tie)	1992 ²	Environmental interpretation and education programs should be encouraged throughout Nevada.
7	2002 ¹	Nevada's growing population is placing an increasing demand on recreation resources and recreation suppliers at all levels, statewide. New resources need to be identified, acquired, funded, and developed.
6	1992 ²	Nevada's growing population is placing an increasing demand on recreation resources and recreation suppliers at all levels, statewide.
8	2002 ¹	Coordination and cooperation between public and private recreation providers at all levels is very important. More true support from private citizens, user groups, and governmental entities (local, state, and federal) are important partnerships to pursue.
7	1992 ²	Coordination and cooperation between public and private recreation providers at all levels, and between these providers and the general public, are important partnerships to pursue.

Sources: ¹DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

²Nevada Division of State Parks. 1992. **Recreation in Nevada—1992 Statewide Comprehensive Outdoor Recreation Plan**. NDSP, DCNR. Carson City, Nevada.

Table A.9 Actions Determination—Valid Questionnaire Returns from the Three Surveys							
	Mailing	Date Mailed	# Surveys Mailed		Responses		
			Total	Valid	Total	Valid	%
First Survey	First*	January 30, 2002	132	131	61	59	45
	Follow-Up	April 30, 2002	71	71	22	22	17
	Total Responses				83	81	62
Second Survey	First	July 11, 2002	131	130	47	47	36
	Follow-Up	August 2, 2002	85	84	34	32	25
	Total Responses				81	79	61
Third Survey	First	August 30, 2002	130	130	51	50	38
	Follow-Up	September 23, 2002	77	77	35	33	25
	Total Responses				86	83	63

Source: DeLoney, James A. 2002. Nevada's Outdoor Recreation Actions Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

*Sample size for the first survey was 132, but one person dropped out, leaving 131 valid participants. Although 131 surveys were mailed for the second survey, one participant passed away before receiving the survey, reducing the sample size to 130. The sample for the third survey was 130.

Participants were asked to write one *very brief* action to address each of the eight issues previously identified by the same participants. Participants were also informed that the responses would be tabulated and grouped to identify actions recommended most frequently by the participants in the process, and then the most popular actions would be returned to them to rank.

Sixty-one participants responded to the first mailing of the first survey. Two of these surveys were invalid, leaving 59 valid responses, which comprised 73% of the 81 valid responses.

Follow-Up to Survey # 1

After the initiation of survey # 1, other work projects delayed the reminder or follow-up mailing until April 30, 2002. Seventy-one participants received the follow-up letter. Twenty-two of the

recipients responded to the second mailing, accounting for almost 27% of the 83 respondents.

Eighty-three participants responded to the initial and follow-up mailings. These 83 respondents represented over 63% of the 131 participants who received the questionnaire. Two of the responses were invalid leaving 81 valid responses for a response rate of almost 62%.

Survey # 2—Ranking of Actions—First Round

On July 11, 2002, the 131 participants in the process were mailed the second survey in the actions process. Before receiving the second survey, one participant had passed away, leaving a sample size of 130. This participant had completed all four surveys requested up until the time of his death.

Participants were asked to select one action to address each of the eight issues, and then weight each action.

Respondents were given a total of 100 points to distribute among the eight actions they selected. The range of the weighted scores for each action was 5-65 points.

Over 600 actions were received from the 83 respondents to the first actions survey. A few of the actions were combined reducing the number of actions to 573. Respondents found the lengthy list of actions difficult and time-consuming to respond to. Respondents suggested that the number of actions be reduced further by the Nevada Division of State Parks (NDSP) before submission to the participants in the process.

Respondents seemed to trust the NDSP to combine similar actions. In the future, this author suggests that the NDSP substantially reduce the list before mailing to the participants. One obvious way to reduce the list of actions is to reduce the number of issues from eight to five. The elimination of three issues would have reduced the number of actions on the initial list by approximately 240. Starting with 360 actions rather than over 600 would simplify the process and make the survey more manageable to administer. Further reduction of the list of issues could be accomplished by a panel similar to the one described above to reduce the list of issues.

Forty-six, or almost 35% of the 130 participants, responded to the first mailing.

Email Reminder to Survey # 2

On July 16, 2002, an email reminder was sent to 115 of the 131 participants, almost 88%, for whom email addresses were available. It was thought that the email reminder might improve the response rate. Responses to the email reminder were 20 undeliverable messages, 6 delivery status notifications (delays), 38 confirmations that the emails were opened by the recipient, and 27 various other responses. Some participants returned an email expressing thanks for the reminder and stating their intentions to promptly complete and return the questionnaire. Subsequently, these participants did complete and return the questionnaire.

Although the email reminder did generate a significant amount of interest, it is difficult to assess its impact on the response rate. The follow-up letter to survey # 2 described below may have accomplished similar results without the email. Regardless, the email did remind a significant number of participants about the survey in a timely fashion.

Follow-Up to Survey # 2

On August 2, 2002, 86 non-respondents to the first mailing were mailed a follow-up survey encouraging them to complete and return the questionnaire. Thirty-four responses resulted from the follow-up to survey # 2, two of which were invalid. The 32 valid responses represent almost 41% of the total responses.

Eighty-one responses were received from both mailings to conduct survey # 2 for a 62% response rate. Two responses were completed incorrectly

and were declared invalid, reducing the valid response to 79, or almost 61%.

Survey # 3—Ranking of Actions— Second Round

Results of the second actions survey were used to reduce the list of 573 actions to 110 actions. The purpose of the third actions survey was to reduce the list of 110 actions even further for publication in **Nevada's 2003 Outdoor Recreation Plan**.

On August 30, 2002, the 130 participants remaining in the process were mailed survey materials similar to the second survey. Major differences in the materials were the cover letter and the reduction of the list of actions from 573 to 110. Participants were asked to select one action for each of the eight outdoor recreation issues, and then weight the eight actions from 5-65 points per action for a total of 100 points.

Fifty-one participants responded to the first mailing of the third survey on actions. One response was invalid leaving 50 valid responses. Fifty valid responses out of 130 participants represent a return rate of over 38%, and 60% of the 83 valid responses received from both mailings. The second mailing, the follow-up, is described below.

Follow-Up to Survey # 3

On September 23, 2002, a follow-up survey was sent to the 77 non-respondents to the first mailing. This mailing generated 35 responses, two of which were invalid, leaving 33 valid responses, or a response rate of almost 43% from the 77 recipients of the second

mailing. These 33 responses represents almost 40% of the 83 responses received from both mailings.

The two mailings for the third actions survey generated 86 responses. Three questionnaires returned were invalid, leaving 83 valid returns for a response rate of almost 64%.

The second mailing for the third actions survey clearly defined the ranking of the actions for presentation in **Nevada's 2003 Outdoor Recreation Plan**. The actions ranked in the second mailing are significantly different from the first mailing. These results illustrate the importance of a sufficient number of mailings to correctly rank the variables in question.

Results of the actions survey are presented in Chapter 1. The complete listing of actions identified is available by contacting the Nevada Division of State Parks in Carson City, Nevada.

Suggestions to Improve Future Applications of the Modified Delphi Technique

The six surveys conducted to implement the modified Delphi technique to identify and rank issues and actions for the **2003 SCORP** followed an abbreviated version of the technique for mail surveys presented in Don A. Dillman's book titled **Mail and Internet Surveys—The Tailored Design Method** (Dillman 2000). Budget, staff, and time limitations are the reason for the abbreviated version.

Even though response rates are excellent for the six surveys, response rates could have been higher had the "Dillman

Technique” been followed more closely. Specific suggestions to improve the survey process are listed below.

Recommendations to Improve the Issues and Actions Process

1. Planning and Budget
 - Plan and budget the entire process from start to finish.
 - Schedule sufficient time to more closely implement the “Dillman Technique.”
2. Survey Design
 - Redesign the first survey which asked the participants if they wish to participate in the surveys and to complete and return the first questionnaire. Combine Attachments A, B, and C into one questionnaire to be returned. The objective of this approach is to determine respondents who are sincerely interested in participating in the process. Respondents who fail to complete and return the first questionnaire will not become participants in the process.
 - Nine respondents agreed to participate in the process but did not return the first questionnaire. Four of these respondents did not return any questionnaires—a 0 % response rate; five respondents returned 14 of 30 possible surveys for a 47% response rate. The nine who agreed to participate in the surveys but did not return the first questionnaire returned 14 of 54 possible responses for a 26% response rate. Removing those who do not return the first questionnaire from the process will reduce

staff, budget, and time requirements.

Attachments A, B, and C were designed as separate sheets as follows:

Attachment A—Participation Response

Attachment B—Issues Determination—2001 SCORP—Recreation In Nevada For The New Millennium—Questionnaire # 1

Attachment C—2001 SCORP Issues—Please Rank In Order Of Priority

This design allowed respondents to return Attachment A agreeing to participate in the process without returning the questionnaire. Attachment A gave the respondent the option of not participating but remaining on a mailing list to receive future mailings. A simple “yes” or “no” option to the participation question would be better. Permit “no” respondents to return the questionnaire without completing it to reduce follow-up mailings.

3. Follow The “Dillman Technique” outlined in Don A. Dillman’s book titled **Mail and Internet Surveys—The Tailored Design Method**, p. 151.
 - **Prenotice Letter**
 - Send a prenotice letter a few days prior to mailing the first questionnaire of the first survey. A prenotice letter is not

necessary for subsequent surveys in the process due to the connectivity of subsequent surveys with the first survey. This connectivity should be explained in the cover letters accompanying the first questionnaire in each survey.

- **First Questionnaire Mailing**
- Mailing includes a cover letter explaining why each survey is important.
- **Postcard Thank You/Reminder**
- Send a thank you postcard a few days to one week after the first questionnaire of each survey. This mailing expresses appreciation for responding and serves as a reminder to complete and return the questionnaire if the respondent has not already done so.
- **Mail a Replacement Questionnaire**
- Sent to nonrespondents 2-4 weeks after the first questionnaire telling recipients that their completed questionnaire has not been received and urges them to respond.
- **Final Contact**—Optional
 - Dillman suggests that “A final contact that may be made by telephone a week or so after the fourth contact (if telephone numbers are available). It may also be made by Federal Express, priority U.S. mail, or special delivery 2-4 weeks after the previous mailing.” (Dillman, p. 151). The final contact will depend on the staff, time,

and budget resources available. If the return rates are sufficient, this step could be omitted.

- If budget, time, and staff limitations do not permit all of the contacts suggested by Dillman, the two most critical contacts are the first and second questionnaire mailings.
4. Ranking Outdoor Recreation Issues
 - After survey # 2, conduct one additional survey to reduce and refine the ranking of the outdoor recreation issues.
 5. Determining Rankings Of Issues And Actions:
 - Convene a panel to combine and reduce the recommended actions to a more reasonable number of actions for respondents to address.
 - Continue mailings until issues and actions ranked garner 70-80% of the total weighted scores.
 6. Integrate Public Meetings or Panels Into the Process
 - Research how public meetings or panels could be integrated into the process. Public meetings provide an opportunity for interactions among the participants. Mail surveys do not provide opportunities for interactions. Public meetings or more extensive use of panels could shorten the time required to conduct the entire process. Various schemes are outlined in the literature describing how to solicit public input.

Analysis of Responses for the Issues and Actions Surveys

Table A.10 presents an analysis of the number of returns of the issues and actions surveys. Respondents could return no surveys up to a maximum of six. Fifty-one participants, or almost 39%, returned all six surveys. Fourteen, or almost 11%, returned five surveys. Twenty-six, or almost 20%, returned four surveys. Thus, 69% of the 132 respondents returned four or more surveys.

Another 13 participants, or almost 10%, returned three surveys, which means that almost 79% of the participants returned half or more of the surveys. Only four participants, or 3%, who agreed to participate in the process failed to return any questionnaires. Twelve participants, or 9%, returned one survey. Another 12 participants, or 9%, returned two surveys. Twenty-eight of the participants, or over 21%, returned less than half of the six surveys.

Of the 555 surveys returned, 7 were invalid responses, leaving 548 valid responses. These 548 valid responses represent almost 70% of the 788 maximum number of surveys.

Optimization of the Schedule to Send the Replacement Questionnaire

Dillman suggests sending a replacement questionnaire to nonrespondents 2-4 weeks after the initial questionnaire was sent (Dillman, 2000, p. 151). The number of valid returns is recorded by the selected dates shown in Table 11. The purpose of this analysis was to determine the optimum time to allow participants to response to the initial questionnaire mailing before sending a replacement questionnaire. Table 11 shows that returns were substantial between the second and third week, but slowed significantly between the third and fourth week. The optimum time between the initial questionnaire mailing and the replacement questionnaire in Nevada is three weeks.

Table A.10 Analysis of Valid Issues and Actions Surveys Returned by Number of Respondents			
Number of Surveys Returned	Number of Respondents (Includes Invalid Responses)	% of Total	Total # Responses (Excludes Invalid Responses)
0	4	3.0	0
1	12	9.1	12
2	12	9.1	24
3	13	9.9	38
4	26	19.7	100
5	14	10.6	70
6	51	38.6	304
Total	132	100.0	548
	Maximum # Surveys		788*
Overall Percentage of Surveys Returned			69.54%

Sources:

¹DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

²DeLoney, James A. 2002. Nevada's Outdoor Recreation Actions Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Note: *Since two of the participants did not participate in the last two surveys, the maximum number of surveys that could be returned was 788 (132 participants X 6 surveys = 792 surveys) – (2 participants X 2 surveys) = 788 surveys. One survey returned did not have a control number; therefore, it was omitted from this analysis.

Table A.11 Issue¹ and Action² Survey Returns by Selected Times After Initial Mailings							
Survey	Returns After			Follow-Up Sent After First Mailing	Returns by Date Follow-Up Sent	Returns After Follow-Up	Total Number of Valid Returns
	Two weeks	Three weeks	Four weeks				
1 Issues	37	55	67	30 Days	70	53	123
2 Issues	54	NA	NA	16 Days	60	41	101
3 Issues	22	51	NA	21 Days	56	26	82
4 Actions	30	45	52	90 Days	59	22	81
5 Actions	30	46	NA	21 Days	47	32	79
6 Actions	36	50	NA	21 Days	50	33	83

Sources:

¹DeLoney, James A. 2001. Nevada's Outdoor Recreation Issues Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

²DeLoney, James A. 2002. Nevada's Outdoor Recreation Actions Survey (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Budgetary and time constraints must be weighed to decide if more than three weeks should be allowed between the first and second questionnaire mailings. If the entire issues and actions process is conducted by mail, seven surveys are needed. The additional time to conduct seven surveys by waiting longer than three weeks between questionnaire mailings may not be acceptable to management if the plan is due by a certain deadline imposed by federal requirements, particularly if eligibility requirements to participate in federal grants programs are at stake.

Based on this research, it is estimated that the response rate per survey could be increased by 3-10% if the suggestions above are implemented. Of greatest importance is to insure that the weighted scores for the issues and actions selected for publication in the plan comprise 70-80% of the total weighted scores. Iterations should be continued until it is reasonably certain that the outcome would not change significantly if additional iterations were conducted.

2001 Citizen's Survey on Outdoor Recreation

To determine how Nevadans participate in outdoor recreation and their opinions on outdoor recreation issues, the Nevada Division of State Parks conducted a statewide mail survey titled **Nevadans Outdoors—A Survey on Outdoor Recreation in Nevada**. The survey

population consisted of Nevada's driver's license holders. Results of the survey are presented in Chapter 3 of **Nevada's 2003 Outdoor Recreation Plan**. Current plans are to present a complete analysis of this survey in a technical report.

The survey, initiated in January 2001, followed mail survey techniques outlined in Don Dillman's book titled **Mail and Internet Surveys—The Tailored Design Method** published in 2000. Five mailings presented in table 1 were conducted to obtain the maximum response rate. After the prenotice letter, subsequent mailings were reduced by the number of non-deliverables and responses.

Responses to the first and second questionnaire mailings took longer than anticipated; therefore, the third questionnaire was mailed four weeks after the second. The delay in sending out the third mailing allowed potential respondents more time to respond to the first and second mailing. This procedure proved to be effective in several ways. Responses to the first and second mailing increased. The increase in the first and second mailing reduced the postal costs, logistics, and staff time required to complete the third mailing.

Table A.12 presents the five mailings used to conduct **Recreation in Nevada: The 2001 Citizen Survey**.

Table A.12 Survey Mailings and Mailing Dates—Recreation in Nevada: The 2001 Citizen Survey		
Type Mailing	Number Mailed	Date Mailed
Pre-Notice Letter	1,498	JAN 2
First Questionnaire	1,431	JAN 8
Follow-Up Reminder Postcard	1,300	JAN 15
Second Questionnaire	910	JAN 29
Third Questionnaire	625	FEB 20

Source: DeLoney, James A. November 2002. Nevadans Outdoors—A Survey on Outdoor Recreation in Nevada (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Of the 1,498 questionnaires mailed initially, 241, or 16.1%, were returned undeliverable to produce a net sample size of 1,257. Six hundred eighty-one persons returned completed questionnaires for a response rate of 54.2%.

Recipients of the survey not wishing to complete the survey were asked to return the survey blank. Respondents were given this option to reduce the staff time

and costs required to do follow-ups. Fifty-five respondents, or 4.4%, elected this option. Thus, 736 recipients, or 58.6%, did respond to the questionnaire. After consultation with Dr. James A. Busser (2001), it was decided to treat respondents who returned blank questionnaires as non-respondents to calculate the valid response rate.

Results of these five mailings are presented in table A.13.

Table A.13 Survey Mailings and Response Rates—Recreation in Nevada: The 2001 Citizen Survey		
	Number	Percentage
Total Mailed	1,498	---
Undeliverable	241	16.1
Effective Sample	1,257	---
Wave 1 Returns*	474	37.7
Wave 2 Returns*	154	12.3
Wave 3 Returns*	53	4.2
Total Returns	681	54.2

Source: DeLoney, James A. November 2002. Nevadans Outdoors—A Survey on Outdoor Recreation in Nevada (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Note: *There were three questionnaire mailings. Questionnaires for each of the three mailings, or “waves,” were color coded to track the number of returns for each wave.

A sample of 1,498 names was chosen randomly from the list of the 1,438,583 persons (excluding duplicates) in Nevada holding a current Nevada driver's license (Hurst, October 10/25/2000 personal communications with DeLoney). Since the minimum age for persons in Nevada to hold a driver's license is 16 years, persons 16 years of age and older comprised the sampling frame.

Nevada's Department of Motor Vehicles and Public Safety Record Section drew the sample. DMV was instructed to draw the first person, 'n₁,' randomly and then draw the remainder of the sample by pulling every "nth" person. A sample size of 1,500 was requested. For example, if the sample size was 1,438,583 at the time the sample was drawn, "n" would equal 959. The actual number of licenses varies constantly. By the end of December 2002, the number of driver's licenses had increased to 1,574,278, an increase of 9.4% from October 2000 (Hurst 2003).

2001 Citizen's Survey Returns by Week and Follow-Up Questionnaire Mailings

Table A.14 presents the number of survey returns by each week beginning with the first week after the first questionnaire was sent on January 8, 2001. Comparing table A.13 with table A.14 shows that questionnaires from the first "wave" were returned after the date the second "wave" was mailed, January 29, 2001. Four hundred and seventy-four questionnaires from the first wave were returned (table A.13). By the date the second wave was mailed, 358 questionnaires had been received. It is

not known what prompted the return of additional 116 questionnaires from the first wave after the second mailing. This pattern continued throughout the second and third wave.

By the end of the ninth week after the initial mailing, 98% of the questionnaires returned had been received. Fifty-three percent had been received by the date of the second questionnaire was mailed on January 29, 2001, which was three weeks after the first questionnaire was mailed (table A.14).

By the time of the third and final questionnaire was mailed on February 20, 2001, 87% of the questionnaires returned had been received. The third questionnaire was mailed at the end of the sixth week after the first questionnaire was mailed.

Tables A.13 and A.14 clearly illustrate the importance of mailing the questionnaire out three times to conduct a citizen's survey. Failure to conduct the three mailings would substantially reduce the survey response rate.

Determining Proportion of Population Participating: Tables 3.4, 3.7-3.9, and 3.18-3.19

Two questions were used to determine the proportion of the Nevada population participating in outdoor recreation participating in outdoor recreation activities. Question 12 asked the recipient of the questionnaire "Did you participate in any outdoor recreation activities during the year 2000?" Of the 682 completed questionnaires returned, 586 respondents answered this question

and 96 were non-respondents. Of the 586 who responded, 493, or 84.1% responded “yes” and 93, or 15.9%, responded “no.”

If the response was “yes” to Q12, the respondent was asked to go to Q13. In Q13 the respondent was asked to

“Circle “yes” or “no” to indicate whether you participated in each

activity below during the year 2000. If yes, write in your best *estimate* of the number of days you participated in that activity during the year 2000 in Nevada and other states. Leave the “Number of Days” blank if you did not participate in an activity anywhere.”

<p align="center">Table A.14 2001 Citizen's Survey Returns by Week and Follow-Up Questionnaire Mailings</p>				
Week After Mailing	Date Week Ends (2001)	Q'naires Received To Date	Percent of Total	Increase Over Previous Week
--	JAN 8—1st Mailing	NA	NA	NA
1	15-Jan	38	5.63%	38
2	22-Jan	214	31.70%	176
3	JAN 29—1st Follow-up	358	53.04%	144
4	05-Feb	440	65.19%	82
5	12-Feb	544	80.59%	104
6	19-Feb	582	86.22%	38
--	FEB 20—2nd Follow-Up	588	87.11%	6
7	26-Feb	606	89.78%	18
8	05-Mar	607	89.93%	1
9	12-Mar	661	97.93%	54
10	19-Mar	664	98.37%	3
11	26-Mar	670	99.26%	6
12	02-Apr	671	99.41%	1
13	09-Apr	672	99.56%	1
14	16-Apr	673	99.70%	1
15	23-Apr	674	99.85%	1
--	APR 24— Last Q'Naire Rec'd	675	100.00%	1
		Total		675

Source: DeLoney, James A. November 2002. Nevadans Outdoors—A Survey on Outdoor Recreation in Nevada (unpublished survey). Planning and Development Section, Nevada Division of State Parks. Carson City, Nevada.

Listed on Q13 were 41 outdoor recreation activities and two spaces for the respondent to write in "Other (Specify)" outdoor recreation activities. The number of respondents used to calculate the proportion of the population participating for each of the 41 activities was 586 from Q12. The

reason is because the 93 "no" respondents in Q12 were screened from Q13 by Q12. Therefore, we know that these 93 respondents would have responded "no" to each of the 41 individual activities if given the opportunity. Using the 493 "yes" respondents to Q12 would inflate the

proportion of the population participating in outdoor recreation activities.

Table 3.4: The “Total” proportion of the population participating in outdoor recreation activities may exceed the sum of the “in Nevada” and “in other states” proportions if respondents circled “yes” in Q13 to indicate that they participated in an activity but did not fill in the “Number of Days” for “Nevada” and “Other States.” For most of the activities, the “Total” is less than the sum of the “Nevada” and “Other States” because the same respondent engaged in the activity in Nevada and in other states. Each respondent was only counted once per activity to arrive at the total.

Table 3.6: To group the outdoor recreation activities listed in table 3.6, participants were counted only once for each of the grouped activities, such as fishing.

1999-2002 National Survey on Recreation and the Environment

The Nevada Division of State Parks (NDSP) entered into a collection agreement in April 2002 with the United States Department of Agriculture, Forest Service Southern Research Station (SRS) in Athens, Georgia, to provide a summary report from a nationwide survey conducted by the Athens, Georgia Work Unit entitled “National Survey on Recreation and the Environment.” The NDSP was interested in the responses from the survey collected in the State of Nevada. In the original agreement, the U.S. Forest Service agreed to complete and

deliver up to five hard copies and one electronic copy of the special report on or before July 31, 2002. Two amendments to the agreement changed the completion and delivery date to November 30, 2002.

The Nevada Division of State Park’s interest in the **1999-2002 NSRE** was to obtain current outdoor recreation data for use in the development of **Nevada’s 2003 Outdoor Recreation Plan**.

Budgetary and staff limitations precluded the NDSP from conducting similar research. Even if the resources were available to the NDSP, the arrangement with the U.S. Forest Service to provide the summary report for Nevada was the most cost effective way for the agency to obtain the data.

What is the 1999-2002 NSRE?

The following excerpts are direct quotes and extracts from the Southern Research Station’s (SRS) website titled Recreation, Wilderness, Urban Forests, and Demographic Trends Research found at <http://www.srs.fs.fed.us/trends/>. A substantial amount of information about the **1999-2002 NSRE** may be found at this website, including how to contact the SRS staff. The NSRE source citation is

National Survey on Recreation and the Environment (NSRE): 2000-2002. The Interagency National Survey Consortium, Coordinated by the USDA Forest Service, Recreation, Wilderness, and Demographics Trends Research Group, Athens, GA and the Human Dimensions Research Laboratory, University of Tennessee, Knoxville, Tennessee.

“1999-2002 NSRE is the eighth in a continuing series of U.S. National Recreation Surveys. Although similar to the previous national surveys, **1999-2002 NSRE** explores the outdoor recreation needs and environmental interests of the American people in greater depth. The growth of 1999-2002 NSRE reflects the continuing growth of interest in our nation in outdoor recreation and our natural environment.

“1999-2002 NSRE is an in-the-home phone survey of 50,000 households across all ethnic groups throughout the United States. Questions from **1999-2002 NSRE** broadly address such areas as outdoor recreation participation, demographics, household structure, lifestyles, environmental attitudes, natural resource values (for example, concerning Wilderness), constraints to participation, and attitudes toward management policies.” (Foreword, p. 1).

A main goal of the NSRE survey was to achieve minimum sample sizes for each State to support the production of State reports. Accordingly, a sampling strategy was created which provided a quota sample of 400 per State. (Introduction, p. 1).

This sampling approach reached a random sample of telephone numbers rather than of people. “Participants answered questions pertaining to approximately 80 outdoor recreation activities. For analysis and description of results, it was useful to place these activities into 12 groups. For simplicity, each activity was placed in one category.” (Introduction, pp. 1-2).

Brief History of the National Outdoor Recreation Surveys

“The 1999-2000 National Survey on Recreation and the Environment (NSRE) is the latest in a series of national surveys that was started in 1960 by the Outdoor Recreation Resources Review Commission (ORRRC). The federal government (ORRRC) initiated this National Recreation Survey (NRS) to assess outdoor recreation participation in the United States. Since that first in-the-home survey in 1960, six additional NRS’s have been conducted —1965, 1970, 1972, 1977, 1982-83 and 1994-95. Over the years, the NRS surveys have changed in their methodology, composition, funding, and sponsorship.

“In 1960, interviews were done in person over the four seasons of the year. In 1965, interviewing was done only in early fall. The 1970 survey instrument was a brief mailed supplement to the National Fishing and Hunting Survey. The 1982 survey was conducted in person in cooperation with the National Crime Survey, and the 1977, 1994, and 2000 surveys were conducted by telephone.

“In 1994 the NRS was renamed the National Survey on Recreation and the Environment (NSRE). This new name was introduced to reflect the growing interest and emphasis of the U.S. population about their natural environment. Accordingly, the NSRE was expanded to include questions concerning peoples' wildlife and wilderness uses, environmental values, and attitudes regarding public and management issues. Additional information pertaining to the recreational needs of people with challenging and

disabling conditions was also included.” (Foreword, p. 1).

Methods for the Report Titled Nevada Public Lands and You

The report titled **Nevada Public Lands and You: Urban vs. Rural Summary of a Survey of Nevada Citizens on the Uses, Management, and Decision Making Processes Related to Federal Lands in Nevada**, by the University of Nevada Cooperative Extension, was cited extensively in Chapter 4 of this plan.

Principal authors of the 1997 report are Lynn Huntsinger, Adjunct Professor in the Environmental and Resource Sciences Department; Hudson Glimp, Professor in the School of Veterinary Medicine; and Edwin Smith, Area Natural Resources Specialist in the Nevada Cooperative Extension. The project was funded by the University of Nevada Cooperative Extension, USDA Rangeland Research and Education Act Funds, and USDA Sustainable Agriculture Research and Education state program development grant funds (unnumbered page).

Methods used by the authors of the report are cited from the Introduction to the report.

“Methods

“Questionnaire design and mailing methods are based on those described by Dillman (1973). The survey questionnaire was developed and pre-tested extensively in late 1996, with a wide range of stakeholders, those with expertise in survey methodology, and a small sample of citizens and students

involved in the question development and sampling methodology.

“The sample frame selected included registered voters in Nevada. The registered voter rolls were acquired from each county and a random sample was collected from the voter rolls of each county for the survey. Using registered voters means that those that fail to register to vote, (those that) are not eligible to vote, or those that have moved to Nevada very recently are not likely to be represented in this survey. A mail survey was chosen to permit more in-depth questions than possible in a telephone survey. This means that those with limited English reading or writing skills are less likely to be represented in the survey results. Respondents were also given the opportunity to check a box indicating that they “knew nothing” about public lands. Those who checked the box, about 11% of the sample, are not represented in the survey results. About 12% of the sample in urban counties and 10% of the sample in rural counties checked the box.

“A total of 1,111 completed questionnaires were received. The response rate from urban counties was 48% and from the rural counties was 58%, and ranged from a high of 62% in Churchill County to a low of 38% in Clark County. This response rate was higher than most comparable surveys.

“Of importance to the results of this report is how the urban and rural counties were determined. Urban counties were identified as Douglas, Carson, Clark, and Washoe counties. Rural counties were identified as Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon,

Mineral, Nye, Pershing, Storey, and White Pine counties. The counties in each group were randomly “re-sampled” to assure that equal sampling intensity was used in each county for the analysis of urban vs. rural comparisons. For this reason, the number of questionnaires used for the urban vs. rural comparisons is smaller than the total. Respondents were asked whether they lived in a rural area, or a city/suburban area. Typically, more than 80% of the residents from those chosen as rural counties stated that they lived in a rural area, and 75% or more of the residents from those chosen as urban counties stated that they lived in an urban/suburban area. Elko and Douglas counties were the least clearcut of those counties assigned to the urban and rural groups.

In 1997, when the **Nevada Public Lands and You** study was conducted, the population of the four urban counties ranged from 36,216 in Douglas County to 1,106,900 in Clark County. Populations in the 13 rural counties in 1997 ranged from a low of 1,146 in Esmeralda County to a high of 45,534 in Elko (Nary. 1999). Elko County was the only “rural” county with a population greater than one of the “urban” counties in 1997. By the year 2000, populations in Esmeralda County had declined to 971, still the lowest of any county in Nevada, while the population in Clark County had risen to 1,375, 765, by far the most populated county in the state. In the year 2000, the population of Elko

County still exceeds the population of Douglas County by 45,291 to 41,259 (Bureau of Business and Economic Development, University of Nevada, Reno. 2001). Even though Elko County has a larger population than Douglas County, it is more rural in character due to its much larger size. Elko has 10,995,840 acres compared to 480,640 acres for Douglas County (Harris, et al. 2001).

“The Chi-square procedure was used for analysis of the almost exclusively categorical response data. The t-test was used for continuous data.”

General Interpretation of Results

“Caution is urged in interpreting the results of this survey. It would be simplistic to take the results from one question, or a portion of one question, and draw sweeping conclusions from that portion of the survey. It may be tempting to observe that on a particular issue there are major differences in opinion among urban and rural respondents or, conversely, that because there is general agreement on several issues there should be no concern over the differences that may exist. The results from this survey will likely be viewed differently by different groups or interests, and this may be healthy as long as the results are used in a constructive or proactive manner rather than a divisive manner.” (Huntsinger, et al. 1997. Pages 2-3).